OREGON

PROFILES IN soil health

Eric Nelson
Pendelton, Oregon
900 acres
Crops: Organic grains, alfalfa
Covers: Chickling vetch,canola

unlock the SECRETS IN THE SOIL

Organic grain grower sows seeds of hope in soil health

To say Eric Nelson enjoys a challenge is an understatement.

He's a certified organic farmer, growing small grains in a 12-inch precipitation zone—most of which comes between December and February. And if that isn't enough of a challenge, he's also working to reduce his use of tillage while he's integrating diverse rotations and incorporating cover crops.

That's a tall order, and not just because precious little precipitation falls on his farm in any given year. As a certified organic grower, Mr. Nelson can't use chemicals to control weeds or use synthetic fertilizers to help boost his yields, either.

Farmers like Eric Nelson, are working with land grant universities to evaluate new cropping rotations for low-precipitation zones like those in Eastern Oregon.

An unconventional approach

But the fourth-generation farmer has never shied away from the unconventional. "I've always wanted to be a farmer. I just don't want to do it like everybody else," he says.

Farming 900-acres just north of Pendleton, Mr. Nelson began his farming career as one of those conventional producers, but then opted to transition to organic production in 2008 for two primary reasons.

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

"One is economics," he says. "We are a small farm—900 acres is not a very big farm in today's agriculture—and it seems you have to get big or get out. I was doing neither one of those, and I found higher margins in organics."

The other reason he made the transition is rooted in the soil. "I'm a big believer in the idea that the quality of the food you eat is directly related to the health of the soil."

Unconventional challenges

Unlike conventional farming, Mr. Nelson says organic small grain production is much less prescriptive, and there are fewer options he can use to overcome unexpected production issues like weeds or pests.

"There are no convenient ways to get out of a mess that you have created for yourself if you're an organic grower, and so you have to plan a lot further ahead," he says. "I do enjoy that part of it, and I think for the most part there are solutions to most of the hurdles that I encounter."

Nick Sirovatka, a soil conservationist with USDA's Natural Resources Conservation Service has worked with Mr. Nelson and other soil health-minded farmers for several years. He says applying soil health management practices in a low-precipitation environment is a learning process for everyone—producers and conservationists alike.

"Soil health management and farming in general isn't a linear path," NRCS' Sirovatka says.

"Every piece of ground is different. Every practice decision impacts something further down the road, so what you do and how you do it has to be a continuous conversation," he says.

Covers: Learning as they grow

According to Mr. Sirovatka, soil health pioneers and organic farmers, are often learning as they go, but they're providing a valuable service by teaching others about their innovations.

Quinoa is one of a number of potential rotational cash crops being evaluated in an Oregon State University test plot on Eric Nelson's farm near Pendleton, Oregon.

"These pioneers have done a tremendous amount of work. It's to NRCS' benefit to continue to help producers see what others have done, and for us to help these innovators succeed," he says.

One area of innovation is the use of cover crops. While challenging to grow in a semi-arid region, some cover crops are showing great promise on the Nelson farm.

"The spring cover crops are great for addressing weed problems. Our spring crops are very clean," Mr. Nelson says. "And we get enough nitrogen from that cover crop for any needs the spring crops have."

The other benefit is economics. "We have found our yields are basically the same if we grow our own nitrogen as opposed to buying it and it's actually less expensive to grow our own," he says.

Growing with tenacity and innovation

Ben Bowell works jointly for NRCS and Oregon Tilth and specializes in organic production. He says producers like Mr. Nelson are finding innovative ways to apply soil health management principles in their organic cropping systems.

A crop of canola keeps Mr. Nelson's ground covered for 12 months while putting down a strong tap root to help break up compaction layers.

"Organic producers, as with conventional producers, are really up for the challenge," Mr. Bowell says. "I think we will be able to address many issues and provide more answers to them over time as we move forward."

Undaunted by the challenges, Mr. Nelson remains steadfast in his commitment to soil health.

"I think we are going in the right direction with the crop rotations and with the cover crops," he says "It's slower to see change out here, and sometimes it's discouraging. But you just have to believe in what you are doing and believe that it's the right thing to do."

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